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14. (Amended) An illumination assembly for illuminating a large outdoor playing field, comprising:

a support-receiving portion;

a full cut-off luminary coupled to the support;

the full cut-off luminary comprising

a lamp housing that encloses a lamp, the lamp housing having an open end,

a lamp lens mounted upon the open end of the lamp housing,

a reflector disposed between the lamp and the lamp housing, and

a light-blocking shield coupled about the open end of the lamp housing; and

wherein each luminary is coupled to the support such that the illumination assembly achieves full cut-off.

REMARKS

In the above referenced Office Action, the Examiner states in paragraphs 1-4 of the detailed action that the specification does not comply with the recommended formatting for a patent application. The Applicant respectfully directs the Examiner attention to the patent application in question, which complies with the form requirements of 37 CFR 1.77, namely, the patent application comprises an abstract, sufficient drawings, a specification, and at least one claim (see, for example, 35 USC 111, 112, MPEP section 601, and annotations to 37 CFR 1.77).

Literally thousands of patents issue every year that deviate from the suggested format, which is not mandatory. Because Applicant complies with all mandatory formatting requirements, the Applicant respectfully request that the Examiner withdraw all objections to the specification on pages 2-5 of the Detailed Action.

Claims 1-22 stand rejected under 35 USC 112. The Examiner states in paragraphs 5-9 of the Detailed Action that the claims are in a narrative form and contain functional and operational

language. Independent claims 1, 9 and 14 have been amended to more clearly describe the invention by reciting the structure that achieves full cut-off, namely the full cut-off illumination assembly as described in the specification on page 11, lines 1-10. Additionally, the Examiner states that the phrase "full cut-off" is indefinite and unspecific. The Examiner's attention is respectfully directed to page 9, lines 19-21 of the specification, which precisely define a full cut-off luminary as a luminary that produces a light distribution of zero candela intensity at an angle of 90 degrees above nadir. This is a precise definition of "full cut-off" which is understood by those of skill in the art, and is provided by the Illuminating Engineering Society of North America. A copy of the definition of "full cut-off" of the IESNA is provided with this Amendment for the Examiner's reference. In addition, the specification on page 11 in lines 1-17, as well as in Figure 3, teaches at least one embodiment of a structure of a full cut-off illumination assembly. Since the term "full cut-off" is understood by one of ordinary skill in the art, and since the claims are amended to more clearly call out the structure of the invention, withdrawal of the objection to the claims under 35 USC 112 is respectfully requested.

In addition, in paragraph 11 of the Detailed Action, claims 1-8, 14, 15, and 20-22 stand rejected under 35 USC 102 as being anticipated by *Armstrong*. Although the rejection is too vague and ambiguous to frame a specific response, by implication, *Armstrong* is said to teach each and every element of the invention as taught by the Applicant. However, *Armstrong* teaches a lighting system for playing fields that does not incorporate full cut-off lighting. Furthermore, Claims 1, 9, and 14 have been amended to clarify the invention by more clearly defining a full cut-off luminary. This clarification clears any confusion between the luminaries of *Armstrong* and the full cut-off luminaries of the Applicant. In fact, the word "full cut-off" luminary never appears in *Armstrong*. Furthermore, *Armstrong* never identifies the problem of spill-effect lighting, which is solved by the Applicant's invention. Accordingly, withdrawal of the rejection under 35 USC 102 based on *Armstrong* is respectfully requested.

Furthermore, in paragraph 12 of the Detailed Action, claims 1, 14, 16-19, and 22 stand rejected under 35 USC 102 as being anticipated by *Elmer*. Although the rejection is too vague

and ambiguous to frame a specific response, by implication, *Elmer* is said to teach each and every element of the invention as taught by the Applicant. However, *Elmer* teaches a compound-beam illuminating device having an opaque reflector, and does not incorporate full cut-off lighting. Furthermore, Claims 1, 9, and 14 have been amended to clarify the invention by more clearly defining a full cut-off luminary. This clarification clears any confusion between the luminaries of *Elmer* and the full cut-off luminaries of the Applicant. In fact, the word "full cut-off" luminary never appears in *Elmer*. Furthermore, *Elmer* never identifies the problem of spill-effect lighting, which is solved by the Applicant's invention. Accordingly, withdrawal of the rejection under 35 USC 102 based on *Elmer* is respectfully requested.

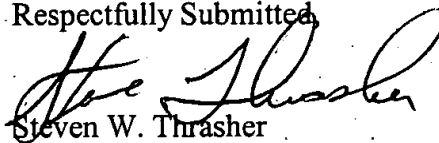
Claims 9-13 stand rejected under 35 USC 103 as being obvious in light of *Armstrong*. The Examiner states that it would be obvious to one of ordinary skill in the art to "canvass a neighborhood" to implement the teachings of claims 9-13. The Applicant respectfully disagrees. In addition to the above-stated reasons the present invention is technically differentiated from *Armstrong*, the teachings of the present invention's claims 1-9 are also differentiated from *Armstrong* in that the teachings of *Armstrong* are directed solely to the use of a lighting system for playing fields. *Armstrong* does not teach, show, suggest, or even mention government regulatory issues, much less discuss a motivation for incorporating regulatory management into a method for providing lighting. *Armstrong* does not relate at all to the field of managing government regulation. The Applicant's invention in claims 9-13 uniquely merges the technical fields of illumination and of regulation management to provide a unique business service. In fact, even assuming, *ad arguendum*, that the examiner is correct in stating that the technical teachings of *Armstrong* are properly combined with the field of government regulation, the result would be a system for promoting the installation of an illumination system that is not a full cut-off system. Such a system would be an inferior competitor of the present invention, but hardly a motivation for the creation for the invention as defined in claims 9-13. Thus, it is respectfully requested that the Examiner withdraw the rejection to claims 9-13 based on 35 USC 103.

In summary, all independent claims are believed to now be in condition for allowance. In

addition, since all independent claims are now in condition for allowance it is noted that each dependent claim is also in condition for allowance, and thus allowance of each dependent claim is also requested. Other references made of record but not relied upon in the Office Action are considered no more relevant to the invention than the reference relied upon by the Examiner.

Thus, it is believed that pending Claims 1-22 are allowable, and allowance of said claims is respectfully requested. If the Examiner has any other matters which remain, the Examiner is encouraged to contact the undersigned attorney to resolve these matters by Examiner's Amendment where possible.

Respectfully Submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 1, 9, and 14 have been amended as follows:

1. (Amended) A lighting system [for illuminating] that illuminates a large outdoor playing field [with zero candela intensity at an angle of ninety degrees above nadir], comprising:
 - a plurality of full cut-off illumination assemblies placed in predetermined locations about the playing field, each illumination assembly comprising a support and a full cut-off luminary coupled to the support;
 - the full cut-off luminary comprising
 - a lamp housing that encloses a lamp, the lamp housing having an open end,
 - a lamp lens mounted upon the open end of the lamp housing,
 - a reflector disposed between the lamp and the lamp housing, and
 - a light-blocking shield coupled about the open end of the lamp housing;
 - wherein each full cut-off luminary achieves [full cut-off] zero candela intensity at an angle of ninety degrees above nadir; and
 - wherein each full cut-off luminary (the luminary) is coupled to a support [in a way] such that the [plurality of illumination assemblies, when placed in the predetermined locations, achieve] lighting system achieves full cut-off.
9. (Amended) A method of enabling the reduction of light pollution in an outdoor environment [for enabling] that enables compliance with local ordinances, comprising:
 - mounting at least one full cut-off luminary about an outdoor area to be lighted;
 - [the full cut-off luminary to light the outdoor area;]
 - the full cut-off luminary comprising
 - a lamp housing that encloses a lamp, the lamp housing having an open end,
 - a lamp lens mounted upon the open end of the lamp housing,
 - a reflector disposed between the lamp and the lamp housing, and
 - a light-blocking shield coupled about the open end of the lamp housing; and
 - removing all non full cut-off luminaries that once lit the outdoor area from the outdoor area to be lighted.

14. (Amended) An illumination assembly for illuminating a large outdoor playing field [with zero candela intensity at an angle of ninety degrees above nadir], comprising:

a support-receiving portion;

a full cut-off luminary coupled to the support;

[wherein each luminary achieves full cut-off;]

the full cut-off luminary comprising

a lamp housing that encloses a lamp, the lamp housing having an open end,

a lamp lens mounted upon the open end of the lamp housing,

a reflector disposed between the lamp and the lamp housing, and

a light-blocking shield coupled about the open end of the lamp housing; and

wherein each luminary is coupled to the support [in a way] such that the illumination assembly achieves full cut-off.

N I N T H E D I T I O N

T H E I E S N A
L I G H T I N G
H A N D B O O K

R E F E R E N C E
& A P P L I C A T I O N



The
L I G H T I N G
A U T H O R I T Y

ILLUMINATING ENGINEERING
SOCIETY OF NORTH AMERICA

Following are the IESNA outdoor luminaire classifications by intensity distribution (see Figure 22-6 in Chapter 22, Roadway Lighting). More detailed information on these luminaire types is found in Chapter 22, Roadway Lighting.

Name	Description of illuminance distribution
Type I	Narrow, symmetric illuminance pattern
Type II	Slightly wider illuminance pattern than Type I
Type III	Wide illuminance pattern
Type IV	Widest illuminance pattern
Type V	Symmetrical circular illuminance pattern
Type VS	Symmetrical, nearly square illuminance pattern

Cutoff classifications are as follows:

Name	Description of intensity distribution
Full cutoff	A luminaire light distribution where zero candela intensity occurs at an angle of 90° above nadir, and at all greater angles from nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10%) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.
Cutoff	A luminaire light distribution where the candela per 1000 lamp lumens does not numerically exceed 25 (2.5%) at an angle of 90° above nadir, and 100 (10%) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.
Semicutoff	A luminaire light distribution where the candela per 1000 lamp lumens does not numerically exceed 50 (5%) at an angle of 90° above nadir, and 200 (20%) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.
Noncutoff	A luminaire light distribution where there is no candela limitation in the zone above maximum candela.

Principal Types of Luminaires

Commercial and Residential

Portable Luminaires. These are completely self-contained luminaires designed to be moved and placed near the task to be lighted. They have a plug and outlet connection to electric power and usually contain integral switching and/or dimming. They usually contain low-wattage incandescent, tungsten-halogen, or compact fluorescent lamps. Examples of portable luminaires are floor and table luminaires, desk luminaires, and partition-mounted luminaires (Figure 7-13).

Furniture Mounted. Permanently attached to furniture or other equipment surface, these luminaires are designed to be in close proximity of the task and produce localized lighting. They can be found under kitchen cabinets and in bathroom vanities (Figure 7-14).

Recessed Downlights. These are general-purpose luminaires designed to provide general or ambient lighting in a space. They are recessed into the ceiling and are designed to produce illuminance on a floor or workplane. Certain types have concentrated luminous intensity distributions designed for spaces with computer VDTs. It is often necessary to augment these luminaires with other types that raise wall luminances and add vertical illuminance to the space. Recessed downlights can be grouped by size.

There are two types of recessed downlights (Figure 7-15). Incandescent, compact fluorescent, and metal-halide lamp downlights usually have modest apertures and can exhibit very low luminances at high viewing angles. Fluorescent lamp troffers use large fluorescent lamps and are usually used with a suspended tile ceiling system. Sizes range from 6 in. × 48 in. to 48 in. square.

Ceiling Surface Mounted. These luminaires can provide general or ambient lighting with the addition that some of the light can be emitted upward to produce a higher ceiling luminance than recessed or surface-mounted downlights. Examples include fluorescent troffers, compact fluorescent

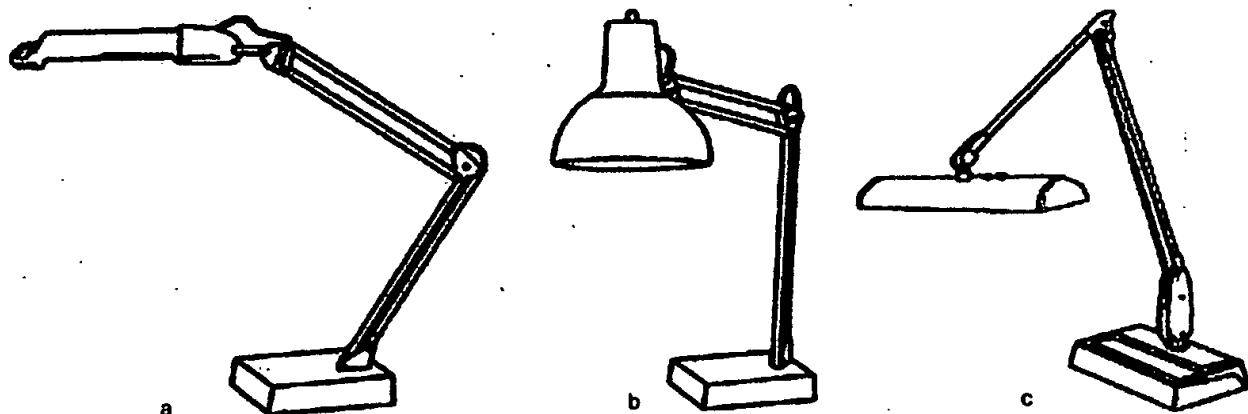


Figure 7-13. Examples of portable luminaires using (a) compact fluorescent lamp, (b) incandescent lamp, and (c) straight fluorescent lamps.